

# PATENT ABSTRACTS OF JAPAN

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## (54) SURFACE PLASMON RESONANCE SENSOR DEVICE USING SURFACE EMITTING LASER

### (57)Abstract:

**PROBLEM TO BE SOLVED:** To provide a surface plasmon resonance sensor device having a configuration for easily measuring not only a single constituent but also multiple constituents, and further easily increasing a dynamic range.

**SOLUTION:** In a surface plasmon resonance sensor device, a surface emitting laser 2 and a sensor array 3 such as a CCD are created on the same substrate 1, and an optical element 6 for increasing the spread angle of laser beams in the direction of one axis is provided on the front surface of the laser 2. Each element is arranged so that laser beams are totally reflected at the interface of a light transmission medium 7 and at the same time a light intensity in the direction of beam spread can be measured by a sensor array 3.

